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NOTIFICATION OF TRANSMITTAL
OF COPIES OF TRANSLATION
OF THE INTERNATIONAL PRELIMINARY REPORT
ON PATENTABILITY
(CHAPTER I OR CHAPTER II)
OF THE PATENT COOPERATION TREATY
(PCT Rules 44bis, 3(c) and 72.2)

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|---|--|---|
| Date of mailing (day/month/year) 21 June 2007 (21.06.2007) | Endress+Hauser PatServe Eingang: | To: ANDRES, Angelika c/o Endress+Hauser (Deutschland) Holding GmbH PatServe Colmarer Strasse 6 79576 Weil am Rhein ALLEMAGNE |
| Applicant's or agent's file reference EH0686-WO | 2, 7. JUNI 2007 | IMPORTANT NOTIFICATION |
| International application No. PCT/EP2005/050905 | Termin: Vortermin: | International filing date (day/month/year) 02 March 2005 (02.03.2005) |
| Applicant | ENDRESS+HAUSER GMBH+CO. KG et al | |

*PA***1. Transmittal of the translation to the applicant.**

The International Bureau transmits herewith a copy of the English translation of the international preliminary report on patentability (Chapter I).



The International Bureau transmits herewith a copy of the English translation of the international preliminary report on patentability (Chapter II).

2. Transmittal of the copy of the translation to the designated or elected Offices.

The International Bureau notifies the applicant that copies of that translation have been transmitted to the following designated or elected Offices requiring such translation:

None

The following designated or elected Offices, having waived the requirement for such a transmittal at this time, will receive copies of that translation from the International Bureau only upon their request:

AE, AG, AL, AM, AP, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DK, DM, DZ, EA, EC, EE, EG, EP, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OA, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

3. Reminder regarding translation into (one of) the official language(s) of the elected Office(s).

The applicant is reminded that, where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary report on patentability (Chapter II).

It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned within the applicable time limit (Rule 74.1). See Volume II of the PCT Applicant's Guide for further details.

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INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY (Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44bis)

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| Applicant's or agent's file reference EH0686-WO | FOR FURTHER ACTION | | See item 4 below |
| International application No. PCT/EP2005/050905 | International filing date (<i>day/month/year</i>) 02 March 2005 (02.03.2005) | Priority date (<i>day/month/year</i>) 03 March 2004 (03.03.2004) | |
| International Patent Classification (8th edition unless older edition indicated) See relevant information in Form PCT/ISA/237 | | | |
| Applicant ENDRESS+HAUSER GMBH+CO. KG | | | |

1. This international preliminary report on patentability (Chapter I) is issued by the International Bureau on behalf of the International Searching Authority under Rule 44 bis.1(a).
2. This REPORT consists of a total of 6 sheets, including this cover sheet.

In the attached sheets, any reference to the written opinion of the International Searching Authority should be read as a reference to the international preliminary report on patentability (Chapter I) instead.

3. This report contains indications relating to the following items:

| | |
|---|---|
| <input checked="" type="checkbox"/> Box No. I | Basis of the report |
| <input type="checkbox"/> Box No. II | Priority |
| <input type="checkbox"/> Box No. III | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability |
| <input type="checkbox"/> Box No. IV | Lack of unity of invention |
| <input checked="" type="checkbox"/> Box No. V | Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |
| <input type="checkbox"/> Box No. VI | Certain documents cited |
| <input type="checkbox"/> Box No. VII | Certain defects in the international application |
| <input type="checkbox"/> Box No. VIII | Certain observations on the international application |

4. The International Bureau will communicate this report to designated Offices in accordance with Rules 44bis.3(c) and 93bis.1 but not, except where the applicant makes an express request under Article 23(2), before the expiration of 30 months from the priority date (Rule 44bis.2).

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| Date of issuance of this report 13 June 2007 (13.06.2007) |
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| Authorized officer |
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| Ellen Moyse |
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| e-mail: pct05.pct@wipo.int |
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| The International Bureau of WIPO 34, chemin des Colombeaux 1211 Geneva 20, Switzerland |
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|--------------------------------|
| Facsimile No. +41 22 338 82 70 |
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Form PCT/IH/373 (January 2004)

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To:

TRANSLATION
PCTWRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

Date of mailing
(day/month/year) **See form PCT/ISA/210**

| | | | |
|---|---|---|--|
| Applicant's or agent's file reference EH0686-WO | | FOR FURTHER ACTION See paragraph 2 below | |
| International application No. PCT/EP2005/050905 | International filing date (day/month/year) 02.03.2005 | Priority date (day/month/year) 03.03.2004 | |
| International Patent Classification (IPC) or both national classification and IPC G01F23/296, H01L41/00 | | | |
| Applicant ENDRESS+HAUSER GMBH+CO. KG | | | |

1. This opinion contains indications relating to the following items:

- Box No. I Basis of the opinion
- Box No. II Priority
- Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- Box No. IV Lack of unity of invention
- Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- Box No. VI Certain documents cited
- Box No. VII Certain defects in the international application
- Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1b(a)(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

| | |
|--|--------------------|
| Name and mailing address of the ISA/IPEA | Authorized officer |
| Facsimile No. | Telephone No. |

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/EP2005/050905

Box No. I

Basis of this opinion

1. With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
 This opinion has been established on the basis of a translation from the original language into the following language _____ which is the language of a translation furnished for the purposes of international search (under Rule 12.3 and 23.1(b)).
2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material
 - a sequence listing
 - table(s) related to the sequence listing
 - b. format of material
 - in written format
 - in computer readable form
 - c. time of filing/furnishing
 - contained in the international application as filed.
 - filed together with the international application in computer readable form.
 - furnished subsequently to this Authority for the purposes of search.
3. In addition, in the case that more than one version or copy of a sequence listing and/or table(s) relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

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|---|
| International application No. PCT/EP2005/050905 |
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|-----------|---|
| Box No. V | Reasoned statement under Rule 43bis, I(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |
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1. Statement

| | | |
|-------------------------------|------------|-----|
| Novelty (N) | Claims | YES |
| | Claims 1-3 | NO |
| Inventive step (IS) | Claims | YES |
| | Claims 1-7 | NO |
| Industrial applicability (IA) | Claims 1-7 | YES |
| | Claims | NO |

2. Citations and explanations:

- 1.** Reference is made to the following documents:

D1: US 3 745 384 A (BLANCHARD W, US) 10 July 1973
(1973-07-10)

D2: US 5 844 491 A (GETMAN ET AL.) 1 December 1998 (1998-12-01)

2. Novelty (PCT Article 33(2))

The present application does not satisfy the requirements of PCT Article 33(1) because the subject matter of claims 1-3 is not novel (PCT Article 33(2)). The reasons are as follows:

2.1 Independent claim 1

D1 discloses (the references between parentheses relate to said document) a device for determining and/or monitoring a process variable of a medium (column 1, lines 4-9), said device having:

- a resonant unit secured to a membrane (column 1, lines 55-60),
- a transceiver unit which excites the membrane and the resonant unit to vibrations and which receives the vibrations of the resonant unit (column 1, lines 60-67, and column 7,

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/EP2005/050905

Box No. V

Reasoned statement under Rule 43bis(1)(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

lines 35-43),

- the transceiver unit being a disc-shaped piezoelectric element (column 1, line 66 - column 2, line 1; column 6, lines 26-29; and figure 1), and
- said device having a control and evaluation unit which monitors and/or determines the process variable on the basis of the vibrations of the resonant unit (column 4, line 21 - column 5, line 16), wherein:
- the disc-shaped piezoelectric element has at least two segments (column 6, lines 26-29) which are of substantially mutually opposite polarity (column 5, lines 63-64; and figure 1),
- at least two electrodes of opposite polarity are attached to the side of the disc-shaped piezoelectric element facing away from the membrane (column 6, lines 42-48; and figure 1).

All the features in claim 1 are already disclosed in D1, and the subject matter of claim 1 is therefore **not novel** (PCT Article 33(2)).

2.2 Dependent claims 2, 3

Dependent claims 2 and 3 contain no features which, in combination with the features of claim 1, meet the requirements of the PCT with regard to novelty, since their additional features are likewise disclosed in D1, as stated below:

- claim 2 (exactly two electrodes of opposite polarity are attached to the side of the piezo-

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/EP2005/050905

Box No. V

Reasoned statement under Rule 43bis, I (a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

electric element facing away from the membrane)
and claim 3 (the electrodes have substantially the
same form): in D1, column 6, lines 42-48.

2.3 Dependent claims 4-7

The additional features in claims 4-7 are directly suggested by D1 and D2 (see: D1, figure 1 for
claims 4 and 5; and D2, column 4, lines 12-21, for
claims 6 and 7).